Prevalence of Online Learning and its Impact on Traditional Education in Sabah, Malaysia: A Case Study on High Schools in Kota Kinabalu

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ABSTRACT

This study examines the impact of online learning on traditional education in Sabah, Malaysia, with a specific focus on an institute namely the **Politeknik Institute** in Kota Kinabalu. Through a case study approach, data were collected via surveys to explore students' perspectives on online learning practices and their implications for traditional teaching methods. The findings reveal a complex interplay between online and traditional education, highlighting both the advantages and challenges of integrating digital platforms into the learning environment. Students reported increased engagement and flexibility in online learning, yet expressed concerns about the lack of personal interaction and hands-on experiences typical of conventional classrooms. And, while online learning is perceived positively as a supplement to traditional education, concerns persist regarding technological barriers, digital literacy skills, and social engagement. This study contributes to the understanding of how online learning can complement traditional educational frameworks and suggests strategies for educators to enhance the learning experience in a rapidly evolving educational landscape. Ultimately, it emphasizes the necessity of adapting teaching methodologies to better serve the diverse needs of students in an increasingly digital world.

Keywords: Online Learning, Challenges of OL, Traditional Education, Covid 19, Technology in education

INTRODUCTION

As online learning continues to grow, it is crucial to investigate students' overall experiences in online learning environments, particularly in the context of traditional education systems. Understanding students' perspectives on their online classes transcends the basic question of satisfaction, delving into how various factors, both inside and outside the classroom, influence the online learning experience. This analysis, based on quantitative research, suggests that students engage in online courses for a variety of personal and pragmatic reasons. Theoretical frameworks indicate that the absence of physical co-presence alters the nature of interaction, leading students to experience their learning environments in a more abstract and intellectual manner. Additionally, uncovering students' experiences with online learning is essential for identifying effective practices, gauging student perceptions, and assessing satisfaction within this new paradigm.

In recent years, online learning has emerged as a significant component of educational systems worldwide, presenting both opportunities and challenges for traditional educational institutions. In Sabah, Malaysia, the integration of online learning into high school education has gained momentum, prompting important questions about its impact on conventional teaching methods and educational outcomes. The Covid-19 pandemic further accelerated this shift, forcing educators and students alike to adapt to online learning as a primary mode of instruction.

Despite these advancements, the Malaysian education system has struggled to fully convince students of the importance of a quality education for their future careers. Often, it is the teaching styles and methods that hinder

students' recognition of the relevance of education to their professional aspirations. To ensure that learners appreciate the connection between education and their career prospects, significant transformations in teaching methodologies within the Malaysian education system are necessary. This study aims to explore these dynamics in high schools in Kota Kinabalu, shedding light on the implications of online learning for traditional education and providing insights for future educational practices.

This survey seeks to explore the evolving educational landscape in Sabah, focusing on the integration of online learning within traditional education systems. Given the significant shift toward online learning, particularly due to the COVID-19 pandemic, And, this study aims to understand its effects on student engagement and academic performance, as well as the perceptions of both educators and students regarding its effectiveness compared to traditional methods. Targeting high school students particularly in Kota Kinabalu, the survey will gather valuable insights to identify challenges and opportunities presented by this shift. It is hoped that it will contribute to a deeper understanding of educational trends and help inform future teaching methodologies.

BACKGROUND TO STUDY

In Malaysia, the emergence and expansion of online learning platforms have played a crucial role in modernizing education, especially in response to the increased reliance on distance teaching and facilitation. A successful online learning environment is characterized by a well-structured course outline, organized content, clear instructions, collaborative learning opportunities, and timely feedback—these elements serve as foundational components of effective online course management. A virtual learning environment, therefore, refers to an online-based platform that provides digital solutions for students and educators, enhancing the overall learning experience.

Today's classrooms extend beyond physical walls, fostering communication and collaboration with the community and broader society. As learners navigate this digital landscape, they face various challenges inherent to online learning, including technical difficulties and the need for self-motivation. These challenges demand adaptation and resilience from both students and educators, highlighting the unique hurdles that online learning presents.

The advent of online learning has revolutionized the educational landscape globally, creating both opportunities and challenges for traditional educational institutions. In Sabah, the integration of online learning platforms in schools has become increasingly common, reshaping how education is delivered. The study will investigate how the incorporation of online learning methods has influenced or transformed traditional educational practices within urban districts, providing insights into the evolving relationship between online and conventional educational approaches. Through this analysis, we seek to understand the implications of these changes for educators, students, and the broader educational framework in Malaysia**.** This paper thus aims to explore the impact of online learning on traditional education, focusing on a case study of one Polytechnic Institution in Kota Kinabalu, Sabah as well as some other high schools in the vicinity.

LITERATURE REVIEW

Online learning is commonly defined in contrast to face-to-face (F2F) learning, with its most distinguishing feature being the absence of a physical classroom. Instead, web-based technologies provide opportunities for out-of-class learning that is independent of time, place, and pace (Bernard et al., 2014; Chigeza & Halbert, 2014; Northey et al., 2015; Israel, 2015; Potter, 2015). Ryan et al. (2016) suggested that, in higher education, online learning is often understood as courses offered entirely online, highlighting the role of Learning Management Systems (LMS) and Virtual Learning Environments (VLEs) such as Moodle and Blackboard in facilitating this shift (Pellas & Kazanidis, 2015).

Digital literacy has become an essential skill set in the 21st-century educational landscape, encompassing the ability to produce and analyze knowledge using technology, as well as developing electronic literacy skills (Qureshi et al., 2021). This evolution signifies a shift in how learners and educators approach education, emphasizing the importance of integrating digital technologies into both learning and professional activities. In this context, school administrations, students, and educators are tasked with preparing future generations to

thrive in a rapidly changing global society.

As we move further into the 21st century, it is evident that the needs of classrooms today differ significantly from those of the 20th century. Research indicates that contemporary educators must transition from traditional teaching methods to become facilitators of learning, creating environments where students can develop skills vital for the modern workforce. The focus has shifted toward preparing students for the complexities of 21st-century work environments, which require innovative teaching strategies that transcend the mere addition of technology to existing classroom structures. Instead, there is a need for a cultural transformation in teaching and learning, altering the roles of both educators and learners (Hallerman, Lewis, & Dresbach, 2019).

One significant contribution to the literature on online learning is Glanella L.'s work on the ***Power of Online Learning*** which highlights the challenges of social isolation inherent in online education and advocates for creating online communities that enhance the social presence of both educators and students. This approach has been shown to positively influence engagement, satisfaction, and peer support (Glanella, 2017). Although online learning is a powerful educational tool, embedding it into everyday teaching or using it as a complete replacement for traditional education can be complicated.

In her article, ***Online Learning: Revealing the Benefits and Challenges***, Brittany Gilbert emphasizes the necessity for prospective online learners to comprehend the differences between traditional and online classroom settings. Both environments offer distinct benefits and drawbacks that can significantly affect student performance. Gilbert's research indicates that online courses provide an excellent avenue for broadening educational opportunities, helping students stay competitive in an increasingly demanding educational landscape. Successful online learners must be self-motivated, independent, and responsible, as understanding their learning style and skills is critical for determining the suitability of online learning (Gilbert, 2015).

And, Brittany also notes that communication within online courses—through supportive comments, constructive criticism, and prompt feedback—is essential for fostering student understanding and participation. Moreover, well-structured courses that offer clear directions and are easily navigable enhance the online learning experience. Overall, online learning environments allow for education to occur unrestricted by time and location, effectively dismantling barriers created by factors such as poverty, geographic limitations, and disabilities (Gilbert, 2015).

The Covid-19 pandemic has further accelerated the shift toward online learning, highlighting its relevance in contemporary educational scenarios. According to Gomeseria R.V. in his article, ***The Challenges of Online Learning as an Online learner in Today's Environment***, online learners develop critical thinking skills, independence, and research habits that align with their subject matter, distinguishing them from their traditionally educated counterparts (Gomeseria, 2018).

It can be said that 20th century teaching strategies are no longer effective whereby teachers must embrace the new teaching strategies that are radically different from those employed in the 20th century classroom. The big change is not adding technology to the current design of the classroom, but changing the culture of teaching and learning and fundamentally changing the job descriptions of teachers and learners. The curriculum must become more relevant to what students will experience in the 21st century workplace. Zhao discusses the need for educational systems to nurture creativity and entrepreneurship, arguing for a departure from traditional pedagogies. (**Zhao, 2012).**

Hallerman, Lewis and Dresbach also state "the role of educators in the 21st century should be helping every student learn how to learn. It is inspiring creativity, encouraging collaboration, expecting, and rewarding critical thinking, and teaching children not only how to communicate, but also the power of effective communication. These are skills students need to develop to thrive in today and tomorrow's dynamic workplace (2019).

This literature review thus underscores the transformative potential of online learning in Sabah, Malaysia, particularly in high schools in Kota Kinabalu. As educators and institutions navigate this evolving landscape, understanding the implications of online learning for traditional education becomes increasingly vital. The integration of online learning strategies offers opportunities for enhancing educational practices, fostering

collaboration, and preparing students for a rapidly changing world.

OVERVIEW OF FINDINGS

This study provides an in-depth overview of its focus, methodology, and key findings on student engagement, educator perspectives, challenges, and the implications for traditional teaching methods. By analyzing the results, the study highlights the perceptions, experiences, and difficulties associated with online learning among students at the **Politeknik Institute in Kota Kinabalu**. Surveys conducted with 96 participants offer a detailed understanding of the effects of online learning on conventional education practices. The findings are diverse and have been categorized as follows:

Student Engagement and Participation

The survey results reveal differing levels of student engagement with online learning at the Politeknik Institute in Kota Kinabalu. While some students reported regular participation and attendance in online classes and activities, others experienced less consistent involvement. Key factors impacting student engagement included internet connectivity, digital literacy skills, and personal motivation. Thus, it can be concurred that students' level of literacy, and their ability to access online learning, is also crucial to the effectiveness of online learning. Hazwani et al. (2020) found that internet connection was the most significant factor to influence the effectiveness of e-learning.

How has online learning affected your ability to collaborate and communicate with peers and teachers?
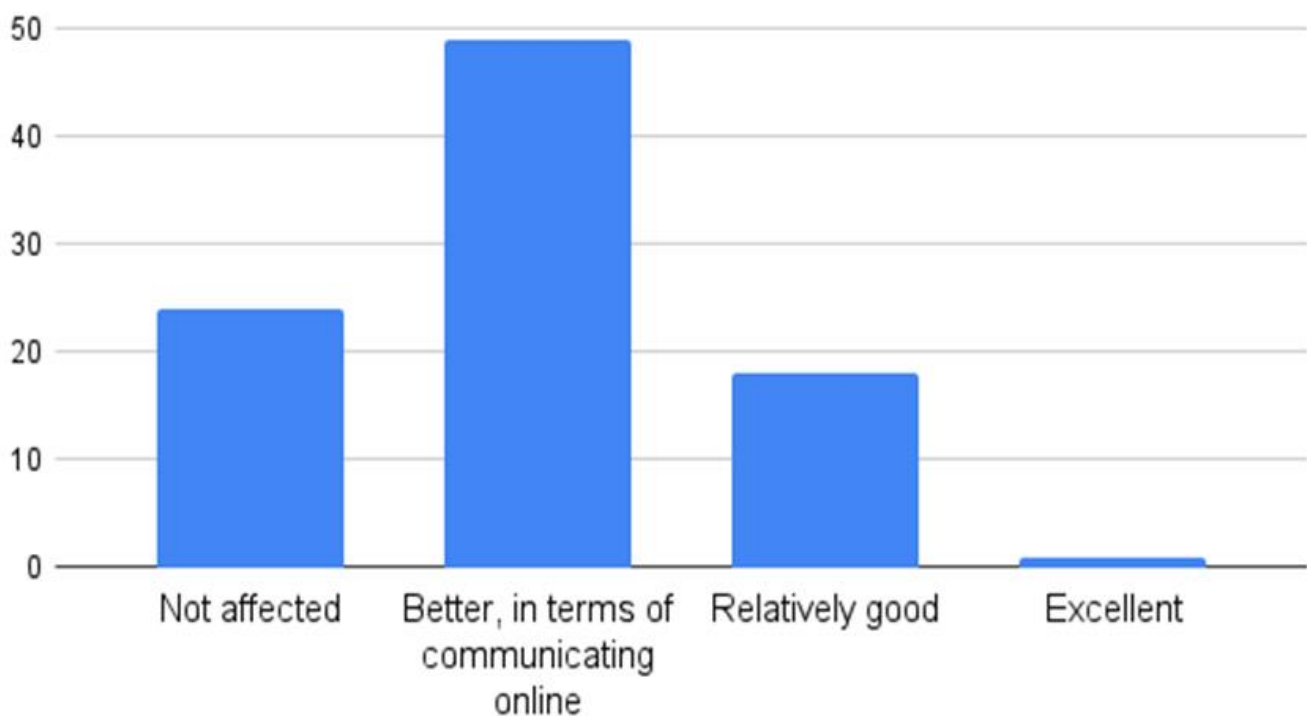
Challenges and Limitations:

Technical difficulties emerged as a significant challenge for both students and educators engaging in online learning at the Politeknik Institute in Kota Kinabalu. Issues such as internet disruptions, gadget problems, and limited access to digital resources were cited as barriers to effective online learning experiences. Additionally, concerns were raised about the social isolation and lack of interpersonal interaction inherent in online learning environments.
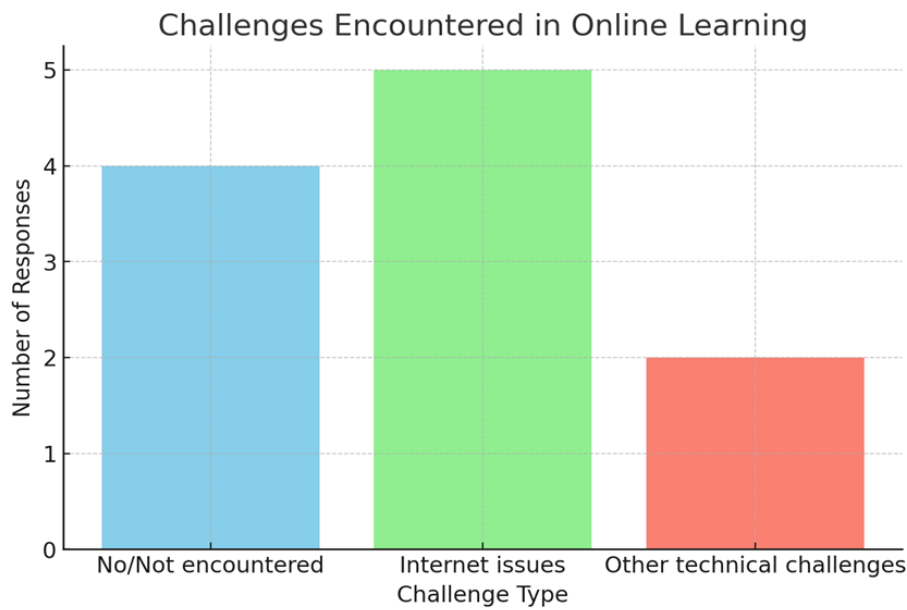
The bar chart is based on the categorization of the responses (e.g., "Yes," "No," "Internet issues," etc.) and count how many falls into each category. As surveyed the breakdown was based on these breakdowns:

- No/Not encountered: 4

- Yes/Internet connection issues: 5

- Other technical challenges (like low storage, lack of device): 2

Educator Perspectives and Practices:

Educators at the Politeknik Institute in Kota Kinabalu expressed mixed views on the effectiveness of online learning as a pedagogical tool. While many recognized the potential benefits of online learning in enhancing student engagement, access to resources, and flexibility in instructional delivery, others raised concerns about the challenges of adapting teaching methods to digital platforms and addressing technical barriers.

Effectiveness of Collaboration and Communication
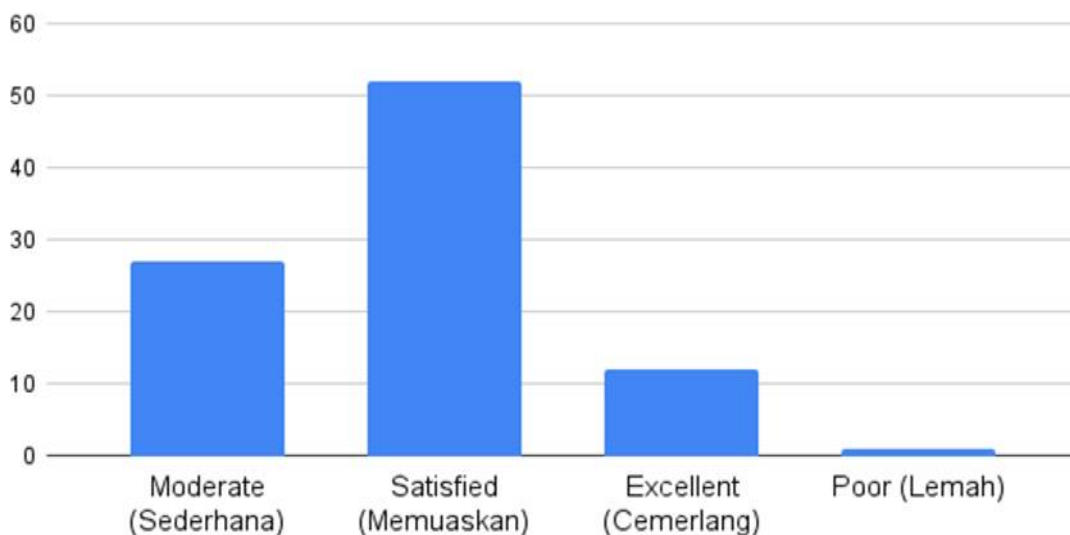
Implications for Traditional Teaching Methods:

The findings from this survey have several implications for traditional teaching methods at the Politeknik Institute in Kota Kinabalu and another high school in the district. To maximize the benefits of online learning while addressing its challenges, several essential areas of focus have been identified:

1. **Improving Infrastructure**: Ensuring reliable access to internet services and learning technologies is fundamental to making online learning effective and accessible to all students.

2. **Enhancing Digital Literacy**: Providing comprehensive digital literacy training for both students and educators will equip them with the necessary skills to navigate and utilize online learning platforms efficiently.

3. **Creating a Supportive Online Learning Environment**: Building a learning environment that encourages engagement, offers technical support, and includes accessible resources can enhance students' overall learning experience.

In summary, integrating online learning into traditional teaching practices requires thoughtful planning and adaptation of teaching strategies, attention to student needs, and active community involvement. This approach can foster equitable access and high-quality educational experiences for all students. Future research on these areas could further support educational development efforts and provide insights for enhancing learning in other secondary schools across the region.

Online Learning Access (in total)

Rate your level of satisfaction with the online learning experience at SMK/SM/Polytechnic
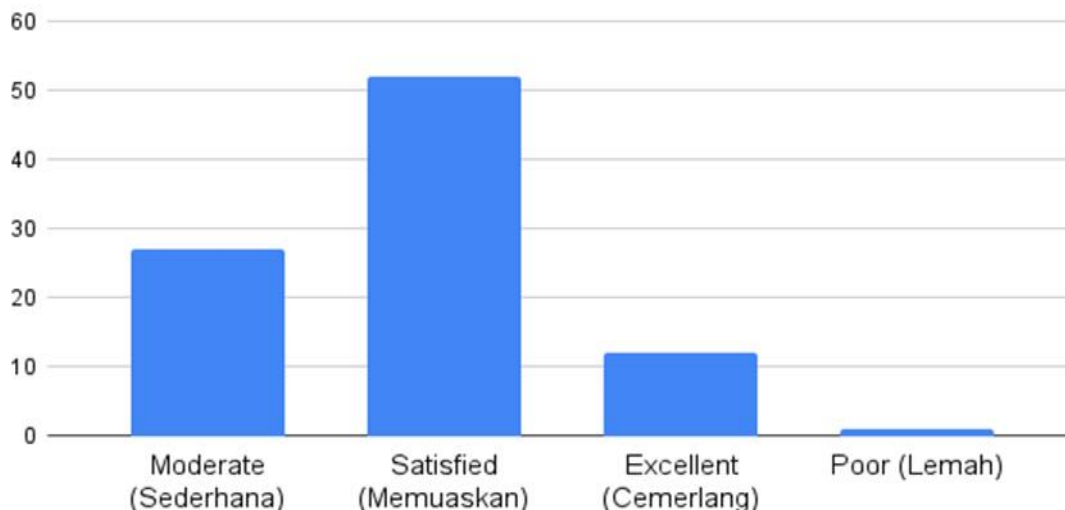
Challenges Faced by Educators and Students:

Despite the benefits, online learning also presents several challenges for educators and students, including:

1. **Digital Literacy Skills:** Active participation in online learning demands a high level of digital literacy, including the ability to efficiently navigate digital platforms, critically evaluate online information, and communicate effectively in virtual settings. However, many students and educators lack the necessary competencies to fully utilize online learning tools and resources. This gap in digital skills can hinder engagement, learning outcomes, and the effective implementation of online education. Addressing this issue through targeted training and support programs is essential for enhancing digital readiness among all participants in the online learning ecosystem.

Facilitation of Online Learning

Do you believe that online learning has positively impacted your academic performance? Please explain.
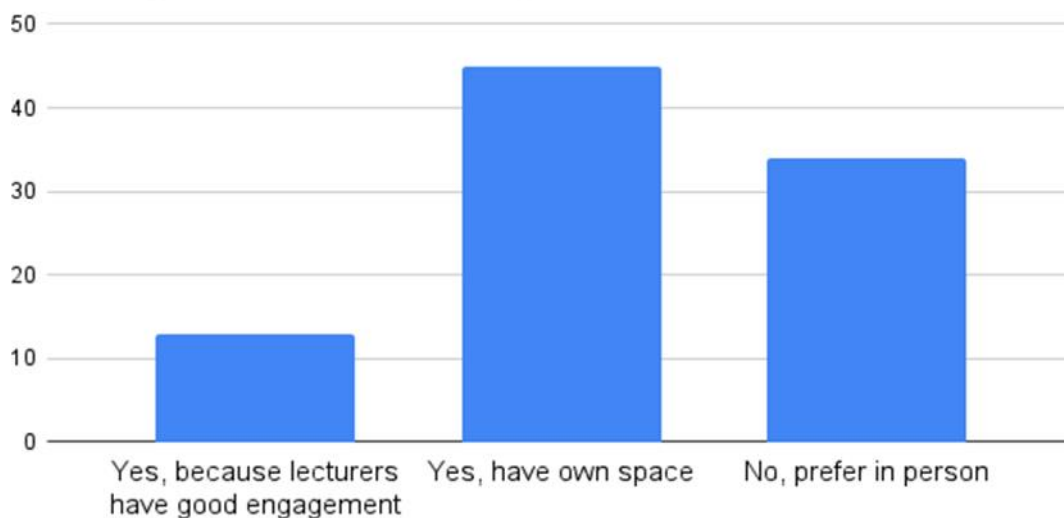
1. **Technological Barriers:** Reliable internet access and access to digital devices remain significant challenges, particularly in rural and underserved areas. Limited technological infrastructure restricts students' ability to fully participate in online learning and access essential educational materials. UNESCO (2020) reported that approximately 46% of households globally lack internet access, with pronounced disparities in connectivity based on region and income level. These challenges are especially prevalent in developing nations but also exist across all educational levels, from primary schools to higher education institutions. Addressing this digital divide is crucial to ensuring equitable access to online learning opportunities.

2. **Social Perception of Online Learning**

3. Rate your level of satisfaction with the online learning experience at SMK/SM/Polytechnic (Nilaikan tahap kepuasan and...belajaran dalam talian di SMK/SM/Politeknik?)

94 responses
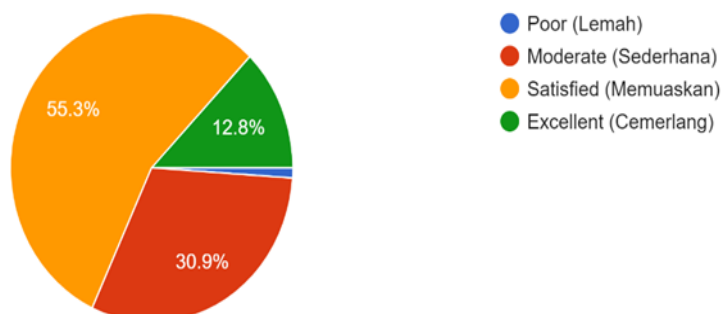
Social Isolation: Online learning can lead to feelings of social isolation and disengagement, as students may miss out on the social interactions and sense of community that traditional classroom environments provide. Building a supportive online learning community and fostering meaningful interactions among students and educators is essential for mitigating feelings of isolation and promoting student engagement. A study published in the *Journal of Educational Computing Research* in 2020 found that social isolation was a common concern among students in online learning environments, with implications for mental health and academic performance.

As seen from the diagrams it can be implied that social isolation factors are real as high number of students are always engaged in online learning activities.
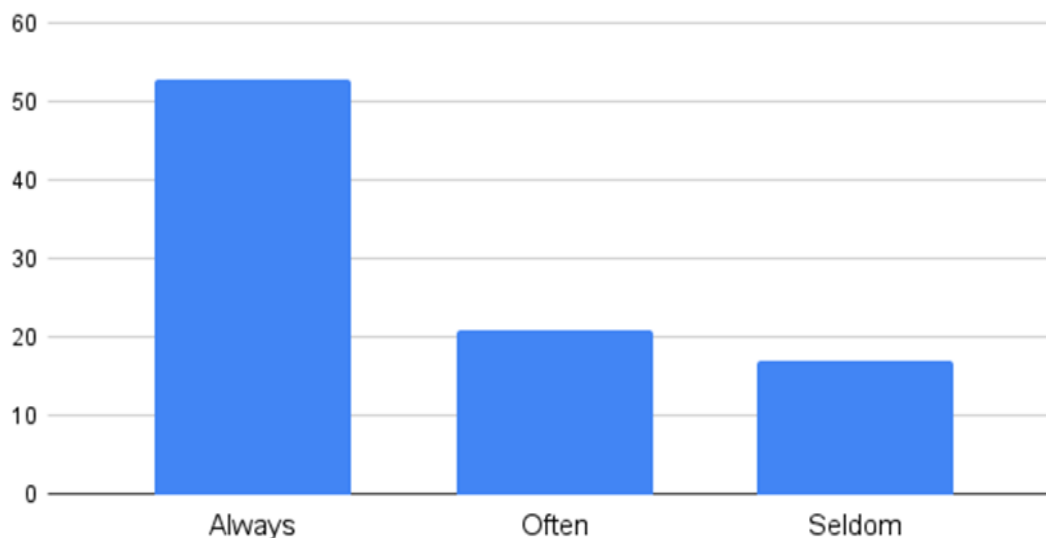
Diagram 1: OL Impact on Academic Performance
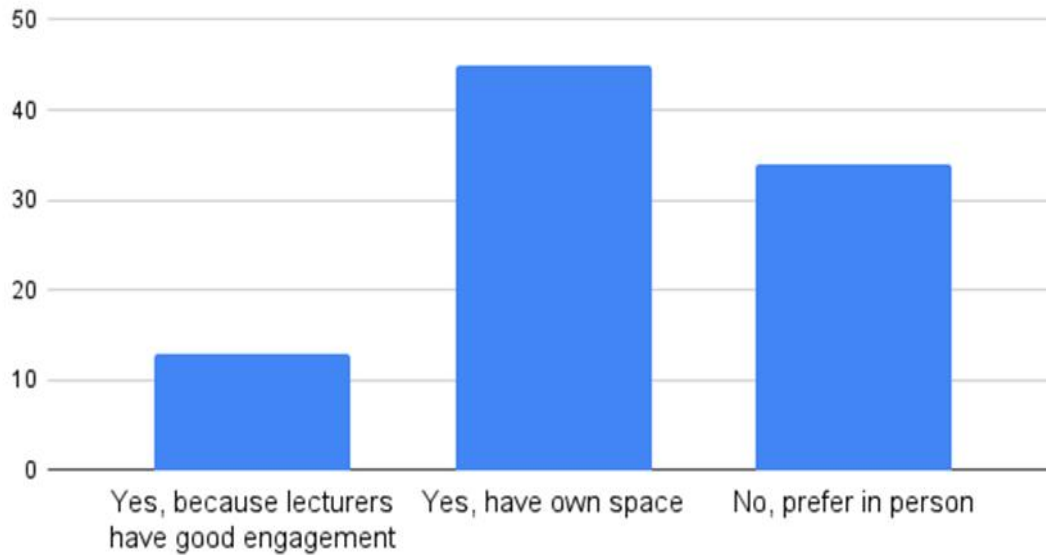

Diagram 2: Frequency of Online Learning

Self-Regulation and Motivation: Online learning requires students to take on greater responsibility for managing their time, maintaining motivation, and proactively engaging with their coursework. However, the absence of direct supervision and face-to-face interactions with educators can pose significant challenges for some learners. A study published in the *International Journal of Educational Technology in Higher Education* (2021) highlights that many students struggle with self-regulation and sustaining motivation in online environments, which often rely on a high degree of autonomy. These challenges underscore the need for strategies and tools that foster self-discipline and intrinsic motivation to help students succeed in online learning.

**Effectiveness of Collaboration and Communication**

How has online learning affected your ability to collaborate and communicate with peers and teachers?
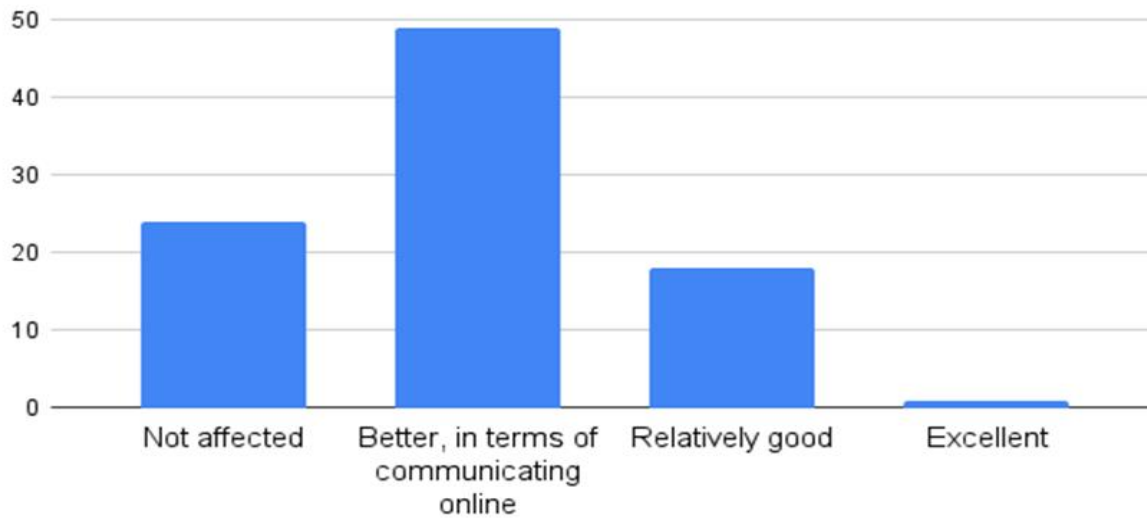
Equity and Access: Online learning has amplified pre-existing disparities in education, particularly affecting students from low-income households and marginalized communities who often lack access to essential technology and resources. These inequities hinder their ability to fully engage in online learning activities. A 2021 report by the World Bank revealed that approximately 1.6 billion children worldwide were impacted by school closures during the COVID-19 pandemic, emphasizing the urgent need to address barriers to equitable access in online education. This situation underscores the importance of targeted interventions, such as subsidized technology and improved internet infrastructure, to bridge the digital divide and promote inclusivity in education.

**Feedbacks For Online Learning**

How frequently do you engage in online learning activities provided by SMK /SM/ Polytechnic?
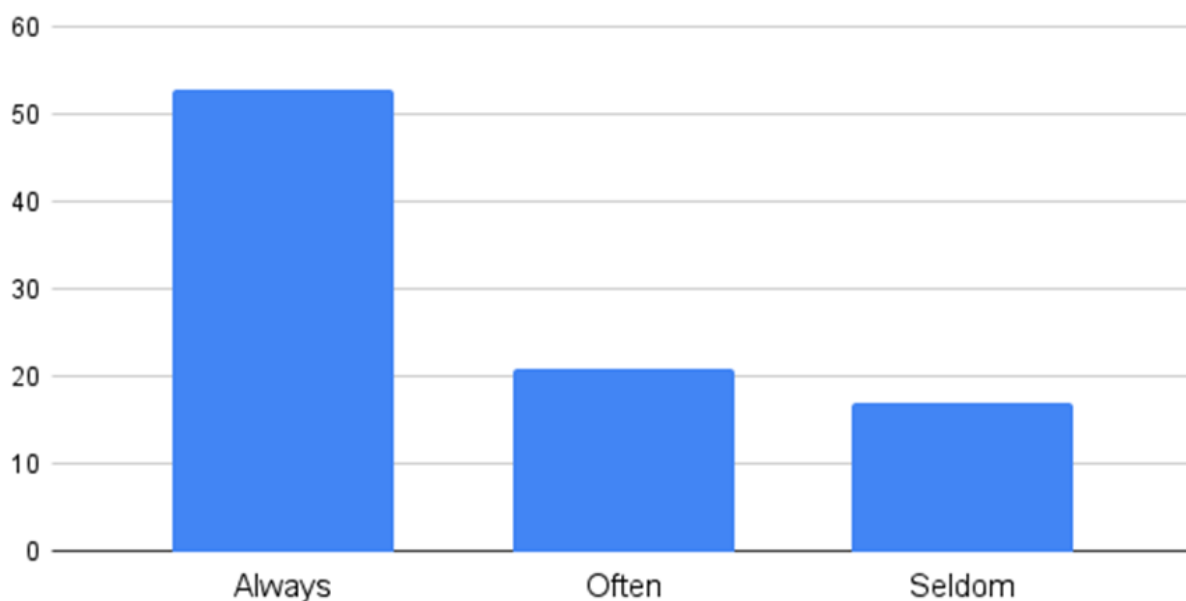
The survey responses reveal a range of engagement levels with online learning activities at the Politeknik Institute in Kota Kinabalu. While some respondents reported consistent participation in daily activities, attending online events, and staying involved in learning tasks, others indicated sporadic engagement due to schedule constraints or rare participation. These findings highlight the diversity in student involvement, reflecting the varied circumstances and attitudes of learners toward online education.

Research by Wildana et al. (2020) supports the effectiveness of online learning, particularly using applications like WhatsApp, Zoom, and Google Classroom, which enhance accessibility and interaction. However, the effectiveness of these platforms is significantly influenced by students' attitudes. Hazwani et al. (2017) noted that a lack of seriousness or careless attitudes among students poses a challenge to the success of online learning initiatives. Addressing these challenges requires collaborative efforts from educators, institutions, and policymakers to foster positive attitudes and improve engagement in online learning environments.

Improvements For Online Learning
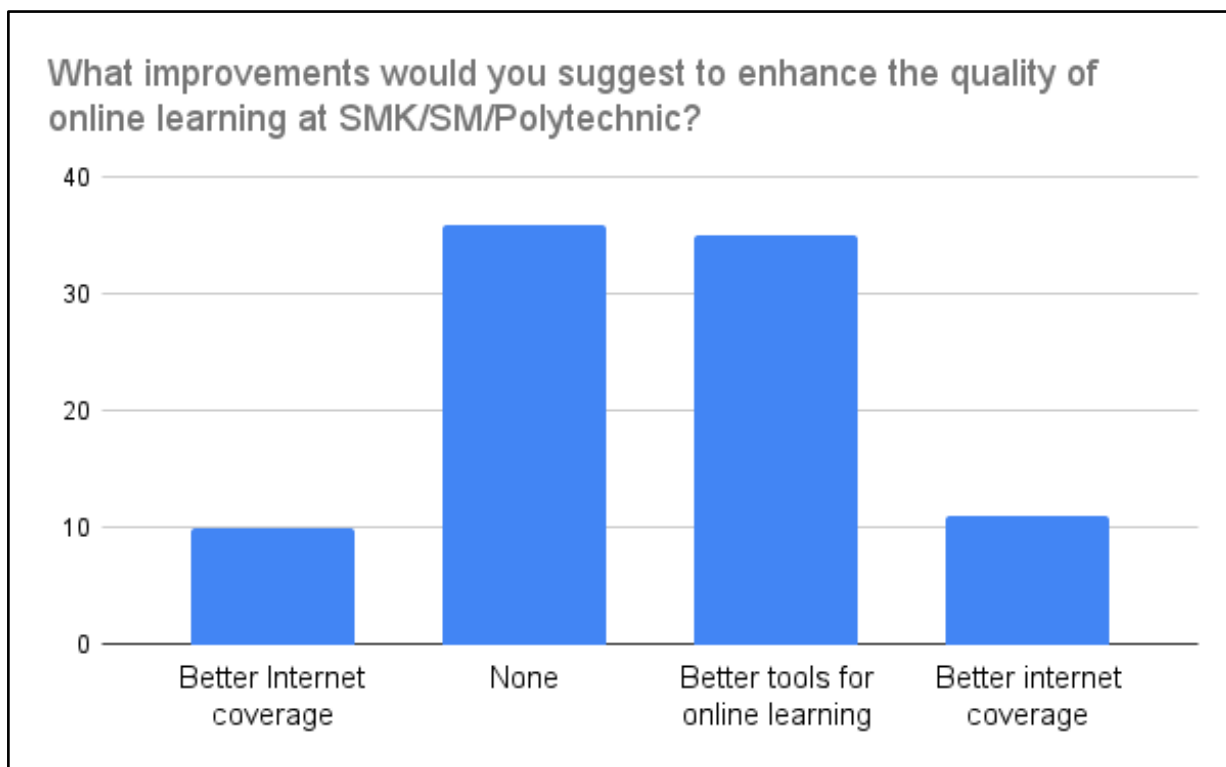

Study Design

This study adopts a case study design, as it enables the collection of detailed and context-specific data on events that influence individuals' behaviours and responses (Chua, 2020). For this research, online learning is defined as a teaching and learning process facilitated through various digital platforms such as 'WhatsApp', 'Zoom', and 'Google Classroom'. It encompasses not only live, interactive sessions but also asynchronous activities and assignments provided by educators in an online format.

The transition to online learning during the Conditional Movement Control Order (CMCO) introduced sudden changes in teaching and learning methods, potentially impacting how students adapt and behave in these new settings. Given the novelty of this situation and the limited available evidence on its effectiveness, this study aims to explore the efficacy and challenges of online learning. To achieve this, a survey questionnaire was employed to gather insights into students' experiences and the obstacles they face in adapting to online education.

Chua (2020) highlights that survey questionnaires are an effective tool for gathering direct insights from respondents about their personal experiences, perceptions, and encounters with specific issues. In this study, a five-point Likert scale questionnaire was developed to address two key areas: **(a)** students' perceptions of the effectiveness of online learning, and **(b)** the challenges they face with online learning facilities. The

questionnaire was distributed with the assistance of a lecturer who is also Head of Quality Control Unit to ensure broad participation and accurate data collection.
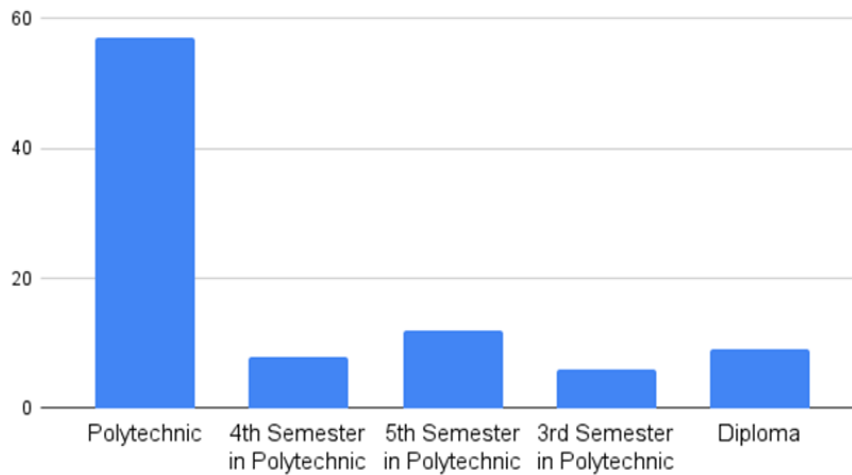
Table 1
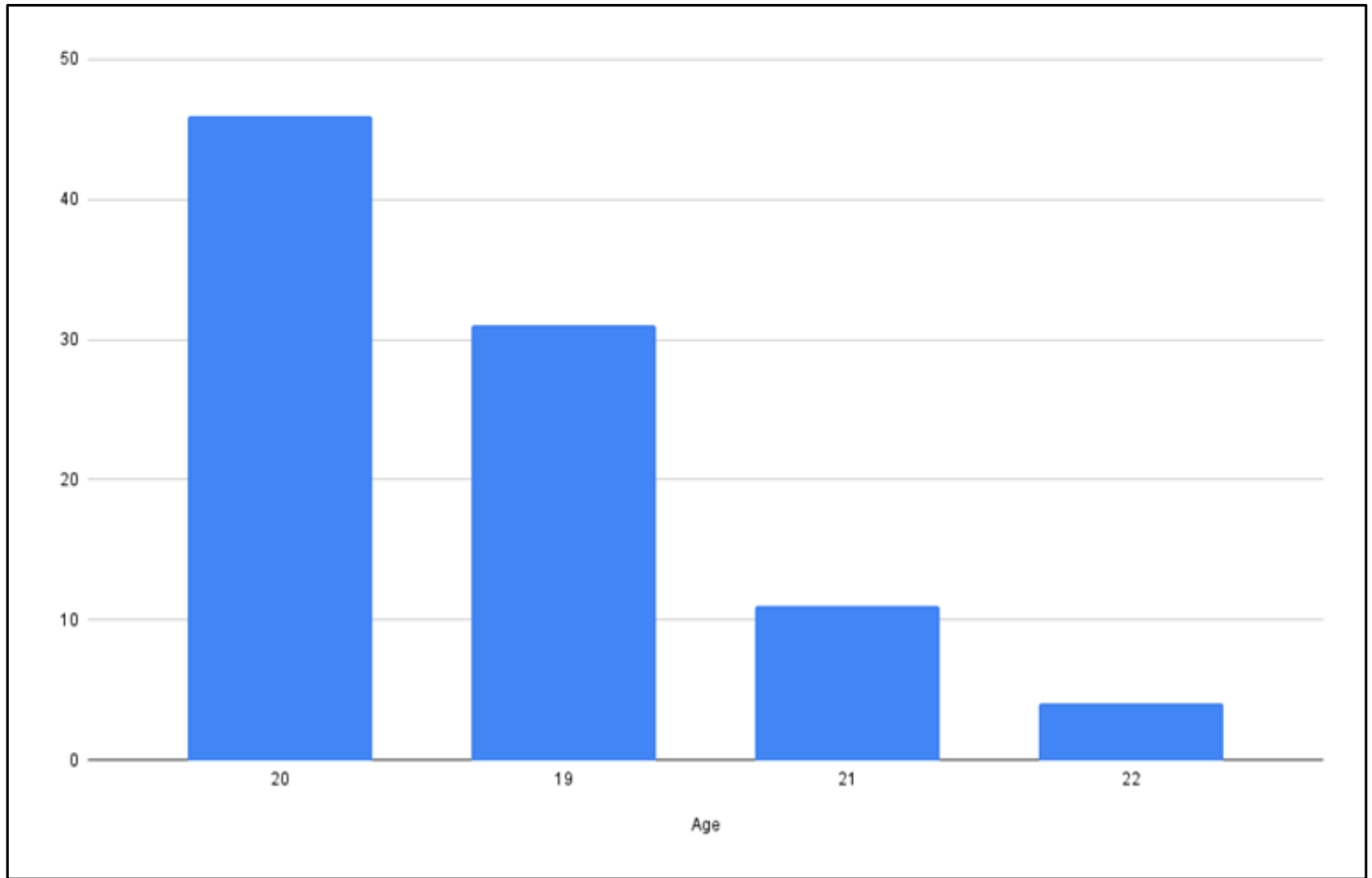
**Table 2**
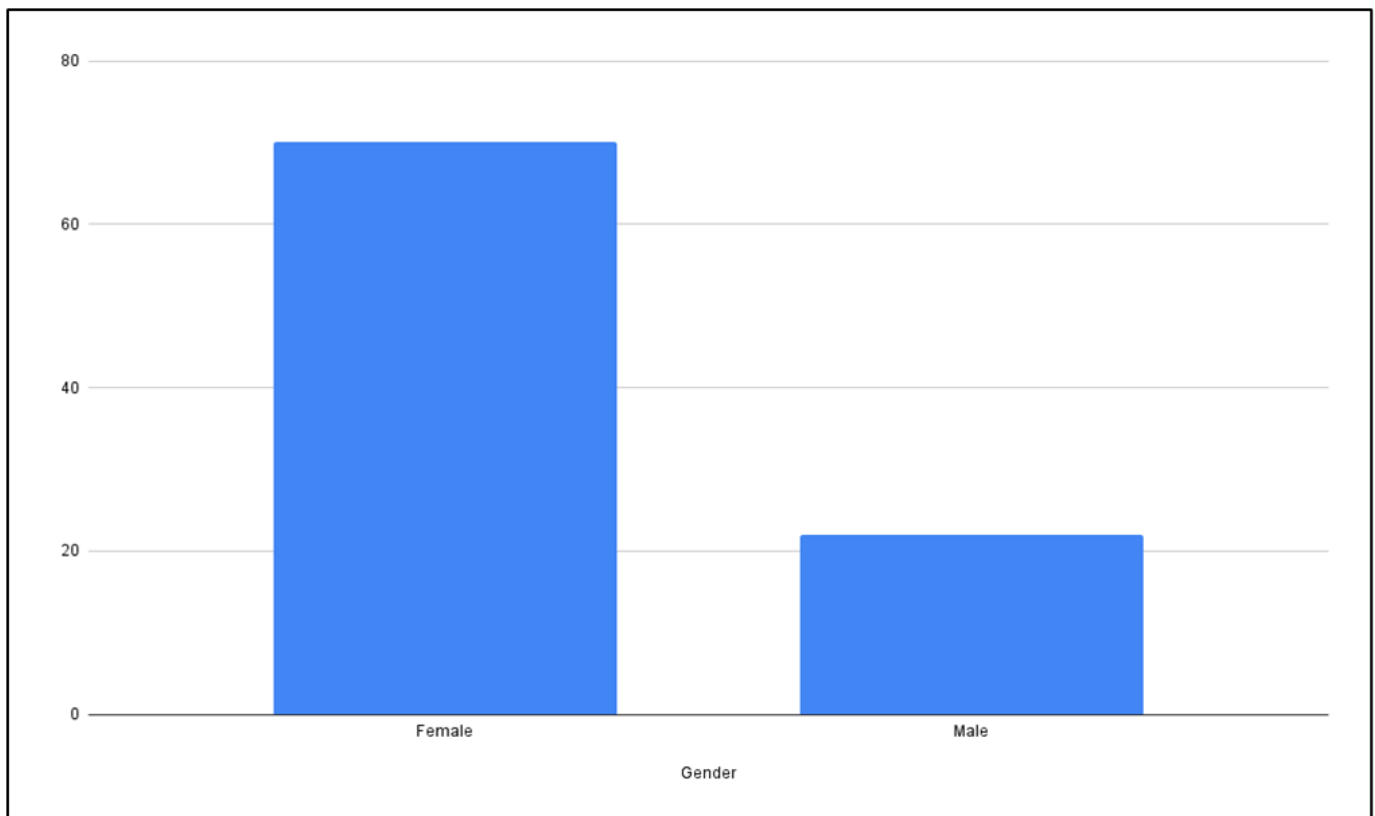
Table 3

What Form are/were you in?

As shown in Tables 1–3, a total of 96 students, aged 15–20, participated in the survey, including pupils from the Politeknik Institute in Kota Kinabalu and some secondary school students. This sampling technique was chosen as the study aimed not to test a hypothesis for generalization but to gain a deeper understanding (Chua, 2020) of students' perceptions regarding the effectiveness of online learning and the challenges they face with online learning facilities.

For the students, the survey questions covered various aspects such as their experience with online learning platforms, perceived benefits and challenges, impact on academic performance, engagement levels, and suggestions for improvement All respondents were engaged in full-time online learning due to the Conditional Movement Control Order (CMCO), which was implemented nationwide on March 18, 2020. This context provided a unique opportunity to explore the experiences of students adapting to online learning during a significant educational shift.

The research methodology involves a case study approach, with **Politeknik Institute** in Kota Kinabalu serving as the focal point. Data was collected through questionnaire surveys administered to students. The triangulation of data sources ensures the reliability and validity of the findings. Based on the survey conducted on "Prevalence of Online Learning and its Impact on Traditional Education in Sabah, Malaysia: A Case Study on High Schools in Kota Kinabalu the following result **findings** and **conclusions** could be drawn:

Level of Participation in Online Learning

How frequently do you engage in online learning activities provided by SMK /SM/ Polytechnic?
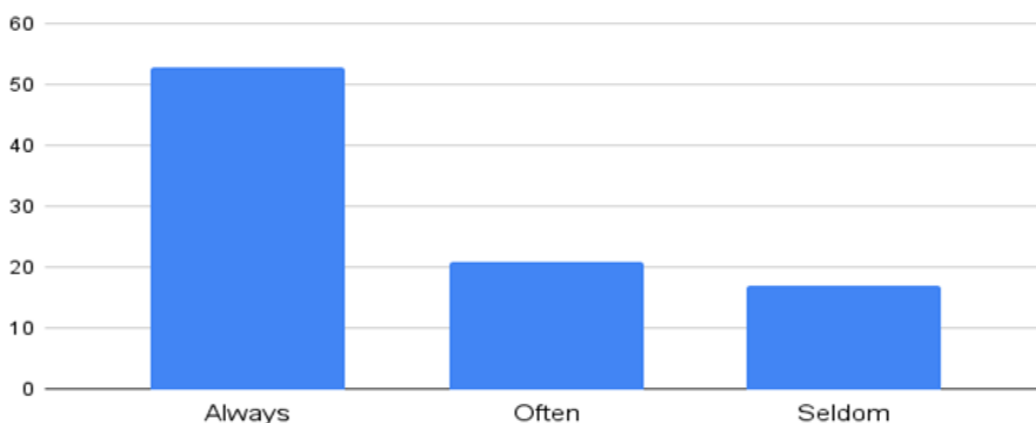
Findings: Respondents generally view online learning as an effective supplement to traditional classroom instruction, highlighting advantages such as flexibility, access to resources, and the ability to learn at one's own pace.

Conclusion: Both students and teachers have a positive perception of online learning, recognizing it as a valuable addition to traditional education. It offers enriched learning experiences and supports the creation of personalized learning paths.

Perceived Effectiveness of Online Learning
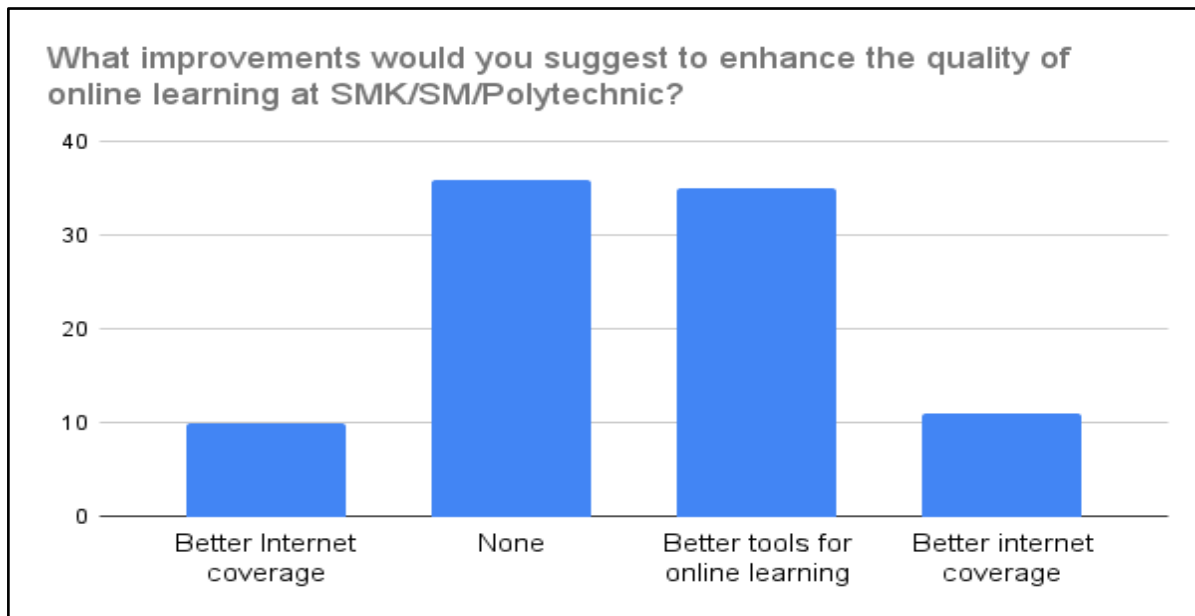
Findings: Respondents generally consider online learning to be an effective complement to traditional classroom instruction, emphasizing benefits like flexibility, access to resources, and the ability to learn at an individualized pace.

Conclusion: Both students and teachers hold a positive view of online learning, seeing it as a valuable enhancement to traditional education. It provides enriched learning experiences and enables the development of personalized learning pathways**.**

Challenges and Limitations of Online Learning:
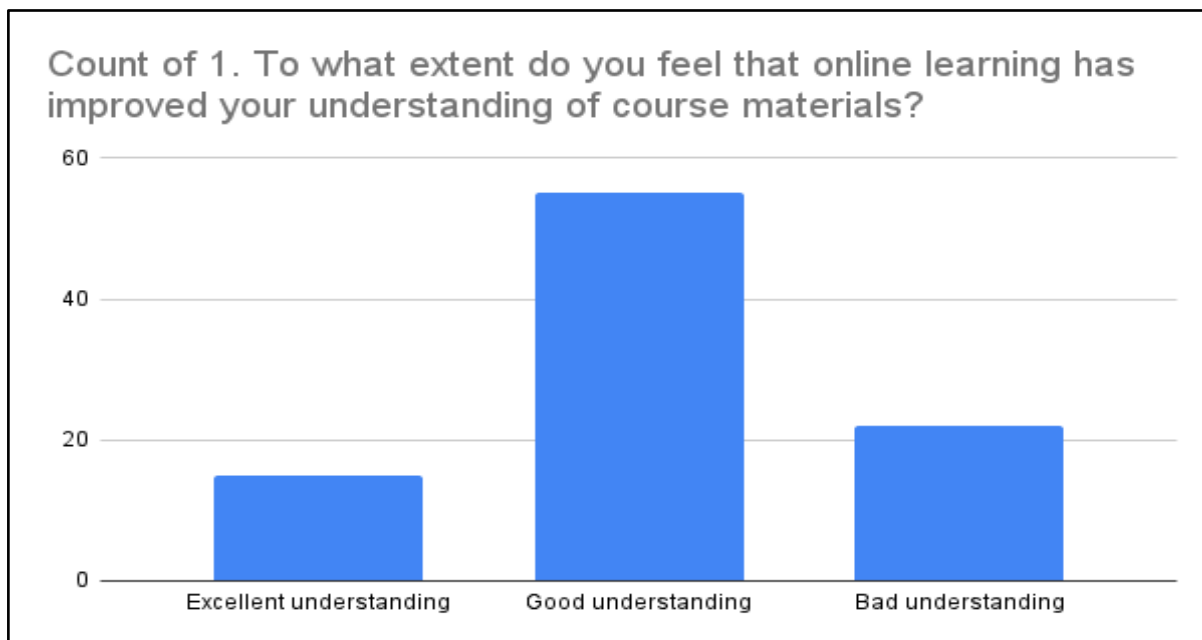
Understanding of Course Materials

Findings: Although online learning is seen to offer several benefits, respondents also highlight challenges such as technological barriers, limited internet access, and concerns over social isolation and motivation.

Conclusion: While online learning presents many advantages, it is essential to address issues related to technological infrastructure and provide sufficient support and resources to ensure equitable access and foster inclusive learning environments.

Impact on Teaching and Learning Practices

Benefits of Resources in Online Learning
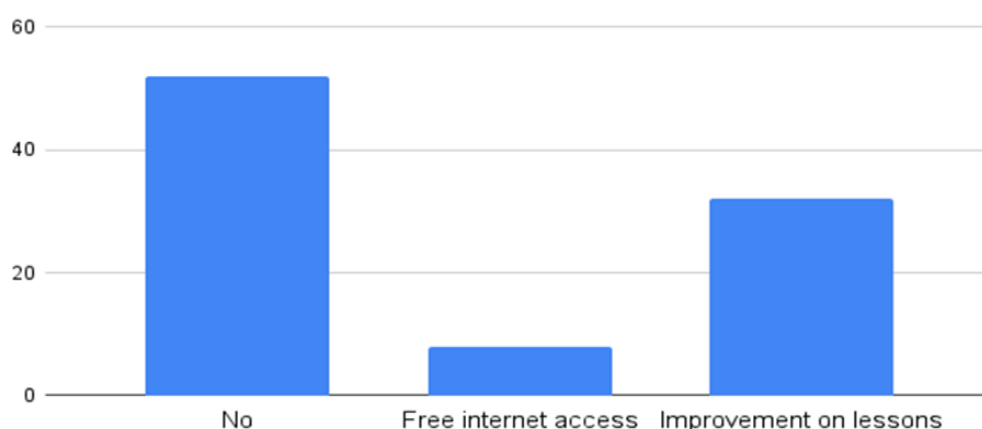
Findings: The integration of online learning has prompted shifts in teaching methods and learning strategies, with educators adjusting their instructional approaches to utilize digital tools and resources effectively.

Conclusion: Online learning has impacted pedagogical practices, encouraging teachers to embrace more student-centred and interactive approaches that foster critical thinking, collaboration, and the development of digital literacy skills.

Student Performance and Engagement

Online Learning Engagements and Learning Needs
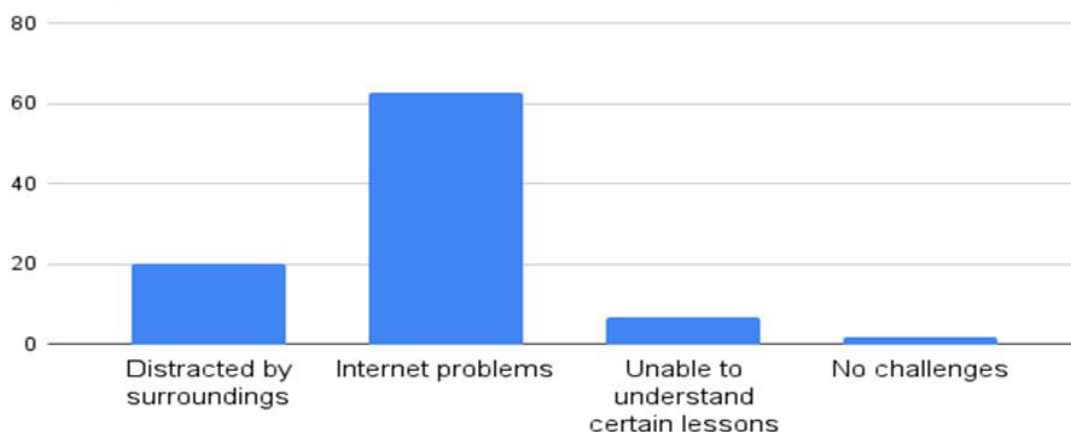
Findings: Some respondents report improvements in student engagement and academic performance due to online learning, while others raise concerns about potential distractions and decreased motivation.

Conclusion: The effect of online learning on student outcomes is varied, emphasizing the importance of continuous evaluation and support to enhance its effectiveness and meet individual learning needs.

Future Directions and Recommendations

There is a consensus among stakeholders on the importance of continued investment in online learning infrastructure, professional development, and curriculum innovation to ensure the sustainable integration of technology-enhanced educational practices in Politeknik Institute and other high schools in the Kota Kinabalu District. The survey discovered that respondent's express interest in further integrating online learning into the curriculum and expanding access to digital resources and training opportunities. In summary, the survey findings suggest that online learning has a significant impact on traditional education practices in Politeknik Institute with both opportunities and challenges emerging from its implementation. By addressing key issues related to access, equity, pedagogy, and support, can leverage online learning to enhance teaching and learning experiences and better prepare students for the demands of the 21st-century knowledge economy.

Impact of Positivity for Online Learning

How do you perceive the balance between online learning and traditional classroom instruction at SMK/SM/Polytechnic?
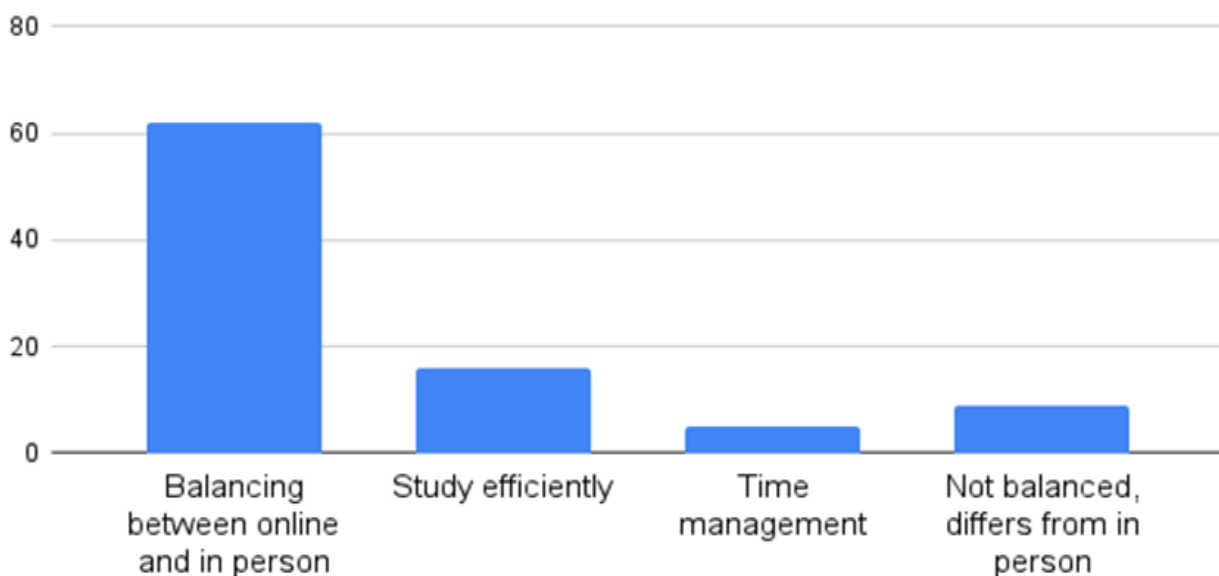
Therefore, based on the findings of the online survey which were distributed mostly to students, several **recommendations** can be made to enhance the implementation of online learning initiatives at Politeknik Institute and other high schools in the Kota Kinabalu town:

1. Digital Literacy Training: Providing comprehensive digital literacy training for students and educators is essential to empower them with the skills and confidence needed to navigate online learning platforms effectively and responsibly.
2. Investment in Infrastructure: There is a need for increased investment in digital infrastructure, including internet connectivity, digital devices, and learning platforms, to ensure reliable access to online learning resources for all students and educators.
3. Pedagogical Innovation**:** Promoting pedagogical innovation and the adoption of student-centred teaching methods that integrate online learning technologies can enhance the learning experience, better addressing the diverse needs and preferences of students.

4. <u>Supportive Learning Environment</u>: Fostering and developing a supportive online learning environment that promotes collaboration, communication, and social interaction is crucial for addressing feelings of social isolation and enhancing student engagement and motivation.

5. <u>Community Engagement:</u> Engaging parents, caregivers, and community stakeholders in the online learning process can help foster a sense of shared responsibility and support for students' educational journey, contributing to their overall success.

By implementing these recommendations, Politeknik Institute and other high schools in the Kota Kinabalu Town can effectively harness the potential of online learning to complement traditional education, improve student outcomes, and equip students for success in the digital age. This case study concludes with a summary of key findings and recommendations based on survey responses, emphasizing the need to address challenges and capitalize on opportunities to maximize the benefits of online learning for traditional education in Sabah. The survey results reveal varying levels of engagement with online learning activities at Politeknik Institute. While some respondents reported regular participation in events and daily involvement in online learning, others noted less frequent engagement, citing factors such as schedule constraints or infrequent participation. These findings reflect the diverse levels of student engagement with online learning initiatives, both at Politeknik Institute and other high schools within the Kota Kinabalu area of Sabah.

Supportiveness of Teachers

Do you feel adequately supported by teachers and school administrators during online learning sessions?
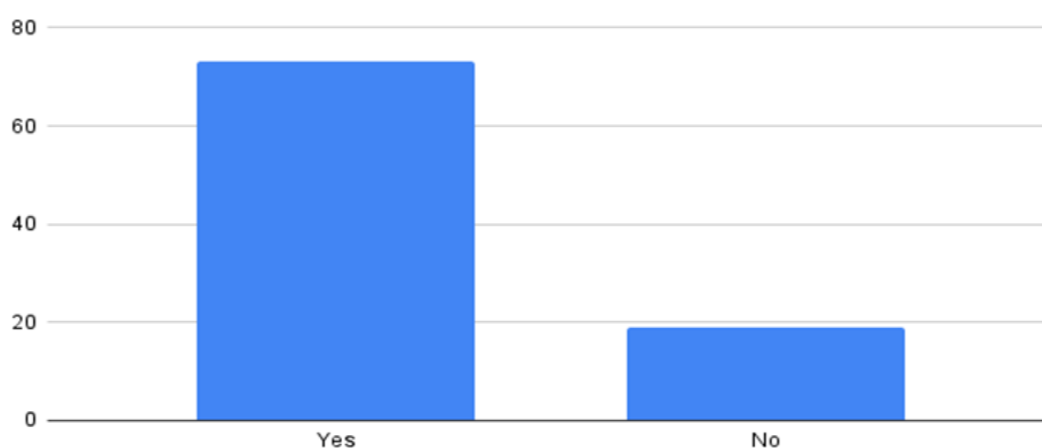
And while online learning provides opportunities for greater flexibility, enhanced access to resources, plus personalized learning experiences, challenges such as technological barriers, digital literacy, and social isolation need to be addressed to optimize its effectiveness. Furthermore, integrating online learning with traditional teaching methods requires thoughtful consideration of pedagogical strategies, infrastructure support, and community involvement to ensure equitable access and high-quality educational experiences for all students.

CONCLUSION

With the advancement of technology, online education allows students to enrol in courses from institutions across the globe. Many schools and universities now offer eLearning or blended courses that combine both in-class and online learning. Even traditional brick-and-mortar institutions are increasingly adopting online courses to keep pace with modern educational practices. The rise of online education is largely driven by technological growth and the desire for flexible learning at one's own pace. In today's global learning environment, digital skills are essential for various roles and industries, with employers seeking graduates who are proficient in digital technologies and platforms.

However, despite the widespread use of smartphones, not all students have equal access to technology outside the classroom. Teachers must also play a role in guiding students to develop healthy habits and attitudes toward

technology use. It is important for educators to actively help students understand both the benefits and potential risks of technology, ensuring they can navigate its opportunities responsibly.

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APPENDICES

Title: Online Learning and its Impact on Traditional Education in Sabah, Malaysia: A Case Study on High Schools in Kota Kinabalu.

This survey seeks to explore the evolving educational landscape in Sabah, focusing on the integration of online learning within traditional education systems. Given the significant shift toward online learning, particularly due to the COVID-19 pandemic, this study aims to understand its effects on student engagement and academic performance, as well as the perceptions of both educators and students regarding its effectiveness compared to traditional methods. Targeting high school students and teachers in Kota Kinabalu, the survey will gather valuable insights to identify challenges and opportunities presented by this shift. Participation is crucial, as it will contribute to a deeper understanding of educational trends and help inform future teaching methodologies. We assure all respondents that their answers will remain confidential and anonymous, and we encourage them to share their experiences to enhance this research.

(Tinjauan ini tertian untuk meneroka landskap pendidikan yang berkembang di Sabah, memfokuskan pada penyepaduan pembelajaran dalam talian dalam system pendidikan tradisional. Memandangkan perubahan ketara ke arah pembelajaran dalam talian, terutamanya disebabkan oleh pandemik COVID-19, kajian ini bertujuan untuk memahami kesannya terhadap penglibatan pelajar dan prestasi akademik, serta persepsi kedua-dua pendidik dan pelajar mengenai keberkesanannya berbanding kaedah tradisional. Menyasarkan pelajar sekolah menengah Kota Kinabalu, tinjauan itu akan mengumpulkan pandangan berharga untuk mengenal pasti cabaran dan peluang yang dikemukakan oleh anjakan ini. Penyertaan adalah penting, kerana ia akan menyumbang kepada pemahaman yang lebih mendalam tentang aliran pendidikan dan membantu memaklumkan metodologi pengajaran masa depan. Kami memberi jaminan kepada semua responden bahawa jawapan mereka akan kekal sulit dan tanpa nama, dan kami menggalakkan mereka untuk berkongsi pengalaman mereka untuk meningkatkan penyelidikan ini.)

A.   Demographic Information:

(Maklumat Demografi)

1.   What is your age? _____

2.   What is your gender? _____

3.   What Form are/were you in? _____

4   How many years have you been attending SMK/SM/Polyteknik) _____

B.   Online Learning Experience:

(Pengalaman Pembelajaran Dalam Talian)

1. **How frequently do you engage in online learning activities provided by SMK /SM/ Polyteknik?**

_____

(*Berapa kerapkah anda melibatkan diri dalam aktiviti pembelajaran dalam talian yang disediakan oleh SMK/SM/Polyteknik*)

2. **Which online learning platforms or tools have you used for your studies?**

_____

(*Platform atau alatan pembelajaran dalam talian manakah yang telah anda gunakan untuk pengajian anda?*)

Google Meet/Google Classroom/Zoom/Moodle/Zotero/ChatGPT/AI

3. **Rate your level of satisfaction with the online learning experience at SMK? SM. (√)**

(*Nilaikan tahap kepuasan anda dengan pengalaman pembelajaran dalam talian di SMK/SM/Polytechnic?*) **(√)**

(i) Poor_____ (ii) Moderate_____ (ii) Satisfied_____ (iv) Excellent_____

(i) Lemah_____(ii) Sederhana_____ (ii) Berpuas hati__ (iv) Cemerlang_____

4. **How do you typically access online learning materials (e.g., computer, smartphone, tablet)?**

_____

Bagaimanakah anda biasanya mengakses bahan pembelajaran dalam talian (cth. komputer, telefon pintar, tablet)?

5. **Have you encountered any technical difficulties or challenges while engaging in online learning? If yes, please specify.**

_____

Pernahkah anda Megawati sebarang masalah teknikal atau cabaran semasa melibatkan diri dalam pembelajaran dalam talian? Jika ya, sila nyatakan.

(C)   Impact on Learning:

       Kesan terhadap Pembelajaran:

1. **To what extent do you feel that online learning has improved your understanding of course materials?**

_____

Sejauh manakah anda merasakan pembelajaran dalam talian telah meningkatkan pemahaman anda tentang bahan kursus?

2. **How has online learning affected your ability to collaborate and communicate with peers and teachers?**

_____

Bagaimanakah pembelajaran dalam talian mempengaruhi keupayaan anda untuk bekerjasama dan berkomunikasi dengan rakan sebaya dan guru?

3.   **Do you believe that online learning has positively impacted your academic performance? Please explain.**

_____

Adakah anda percaya bahawa pembelajaran dalam talian telah memberi kesan positif kepada prestasi akademik anda? Sila jelaskan.

4.   **Has online learning influenced your motivation to learn and engage in class activities? If yes, how?**

_____

Adakah pembelajaran dalam talian mempengaruhi motives anda untuk belajar dan melibatkan diri dalam aktiviti kelas? Jika ya, bagaimana?

D   Challenges and Concerns:

1.   **What are the biggest challenges you face when participating in online learning activities?**

_____

Apakah cabaran terbesar yang anda hadapi semasa menyertai aktiviti pembelajaran dalam talian?

2.   **Do you feel adequately supported by teachers and school administrators during online learning sessions?**

_____

Adakah anda berasa disokong secukupnya oleh guru dan pentadbir sekolah semasa sesi pembelajaran dalam talian?

3.   **Are there any aspects of online learning that you find confusing or difficult to navigate? Please elaborate.**

_____

Adakah terdapat sebarang aspek pembelajaran dalam talian yang anda rasa mengelirukan atau sukar untuk dinavigasi? Sila huraikan.

4.   **How do you perceive the balance between online learning and traditional classroom instruction at SMK/SM/Polyteknik?**

_____

Bagaimanakah anda melihat keseimbangan antara pembelajaran dalam talian dan pengajaran bilik darjah tradisional di SMK/SM/ Polyteknik?

E   Suggestions for Improvement:

Cadangan Penambahbaikan:

1.   **What improvements would you suggest to enhance the quality of online learning at SMK/SM/Polytechnic?**

_____

Apakah penambahbaikan yang anda cadangkan untuk meningkatkan kualiti pembelajaran dalam talian di SMK/SM/Polytechnic?

_____

2.   Are there any additional resources or support services you believe would benefit students engaging in online learning?

_____

Adakah terdapat sebarang sumber tambahan atau perkhidmatan sokongan yang anda percaya akan memberi manfaat kepada pelajar yang terlibat dalam pembelajaran dalam talian?

3.   How can teachers better facilitate online learning experiences to meet the needs of students?

_____

Bagaimanakah guru boleh memudahkan pengalaman pembelajaran dalam talian dengan lebih baik untuk memenuhi keperluan pelajar?

4.   Any other comments or feedback you would like to provide regarding online learning at SMK/SM/Polytechnic?

_____

Sebarang komen atau maklum balas lain yang anda ingin berikan berkenaan pembelajaran dalam talian di SMK/SM/Polytechnic?

End of Questions